

STABILITY AND COURSE OF PERSONALITY DISORDERS: THE NEED TO CONSIDER COMORBIDITIES AND CONTINUITIES BETWEEN AXIS I PSYCHIATRIC DISORDERS AND AXIS II PERSONALITY DISORDERS

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The literature pertaining to the stability and course of personality disorders is briefly reviewed. Available data suggest that PD diagnoses demonstrate only moderate stability and that—although generally associated with a plethora of negative outcomes—they can show improvement over time. This paper highlights the pervasiveness of diagnostic co-occurrence and its implications for continued investigation of the question of PD stability. In addition to examining the stability (and outcome) of PDs, longitudinal studies need to consider continuities between diagnoses. The Collaborative Longitudinal Personality Disorder Study (CLPS) is described briefly vis-a-vis some of these major issues.

STABILITY OF PERSONALITY DISORDERS

The placement of personality disorder (PD) diagnoses on Axis II of the multi-axial Diagnostic and Statistical Manual beginning with the third edition in 1980 (DSM-III) (1) reflected, in part,

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their putative stability relative to the episodic unstable course of Axis I psychiatric disorders (2,3). The DSM-IV (4) general criteria for a PD diagnosis require that the “enduring pattern” (defined in criteria A-C) be “stable and of long duration. . .” and “. . .onset can be traced back at least to adolescence or early adulthood” (p. 633) (criterion D). The evolution of the PD diagnosis has retained this central tenet—i.e., that PD reflect a persistent, pervasive, enduring, and stable pattern. This paper briefly reviews research that has addressed the basic tenet of stability in PD diagnoses. This paper then highlights the pervasiveness of diagnostic co-occurrence (frequently referred to as “comorbidity”) and its implications for continued investigation of the stability and course of PD diagnoses. It is argued that longitudinal studies need to consider “comorbidities” between axis I psychiatric disorders and axis II PD diagnoses. Lastly, a brief overview of the Collaborative Longitudinal Personality Disorder Study (CLPS) is provided vis-a-vis some of the major questions pertaining to stability.

Stability of Personality Disorders: Empirical Findings and Gaps

While the pre-DSM-III (1) era of studies generally reported findings suggesting PD stability, the dominant clinical tendency of assigning PD diagnoses based on treatment refractoriness (and without standardized assessment methodologies) suggests the findings reflect a tautologic relation. Reviews of DSM-III and DSM-III-R studies (3–8) raised many methodologic problems that preclude firm conclusions. Among the methodological limitations highlighted are: limited sample sizes, insufficient attention to measurement and assessment issues (e.g., unstandardized assessments, establishing and maintaining inter-rater reliability, blindness to baseline characteristics, lack of multi-modal assessments), insufficient attention to alternative (e.g., dimensional) models of personality dysfunction, reliance on only two assessment time-points, typically short follow-up periods, paucity of data for PD diagnoses other than borderline PD and antisocial PD, insufficient characterization of co-occurring Axis I psychiatric disorders and Axis II PD diagnoses, insufficient characterization of treatment effects, and the absence of relevant control groups to provide a context.

Nonetheless, keeping the above general potential limitations in

mind, we note that the post DSM-III-R (9) studies have generally suggested that PD diagnoses demonstrate only moderate stability and that—although generally associated with a plethora of negative outcomes—they can show improvement over time. In our 1998 review (3), we noted that low to moderate stability of any PD—even over short follow-up periods (6- to 24-months)—was reported in the 20 selected studies reporting DSM-III-R PD data. While most studies followed borderline PD, few reported data pertaining to the other PD diagnoses. In our more recent 1999 review (5), we considered nine additional longitudinal studies of PD diagnoses published 1997-1998 (10-18). Most studies had small sample sizes, only two studies (12,13) followed more than one PD diagnosis, with borderline (10,14), antisocial (15,17), and depressive (10) PD diagnoses receiving the most attention. Overall, only modest to moderate stability was observed for any PD, let alone specific PD diagnoses. Noteworthy is that borderline and antisocial PD were characterized by moderate stability (kappas approximately 0.5).

Of particular note is Lenzenweger's (19) initial report of findings from the Longitudinal Study of Personality Disorders (LSPD). The LSPD is a prospective longitudinal repeated-measures study of personality pathology, normal personality, and temperament begun in 1990 (19,20). This study assessed 250 participants drawn from a nonclinical, university (Cornell) population at three time points (freshman, sophomore, and senior years) over a four-year period using well-established measures administered reliably by experienced and monitored research clinicians. The International Personality Disorder Examination (IPDE; 21), a semistructured diagnostic interview, was used to assess DSM-III-R (9) Axis II personality disorders and dimensions. In addition, participants completed the Millon Clinical Multiaxial Inventory II (MCMI-II; 22), a self-report instrument that generates separate dimensional scores for each of the 11 DSM-III-R PDs. Of the 250 participants, 129 met criteria for at least one DSM-III-R defined PD and 121 did not meet any PD diagnosis plus had fewer than 10 PD features across all PD diagnostic categories.

Lenzenweger (19) reported that PD feature *dimensions* showed significant levels of stability for individual differences and mean levels on both the IPDE and MCMI-II instruments. Stability coefficients (Pearson product-moment correlation coefficients) for total

number of PD features on the IPDE ranged from .61 (assessment timepoint 1 to timepoint 3) to .70 (timepoint 1 to timepoint 2). Cluster B had highest stability coefficients (range .60 to .78), followed by cluster C (range .52 to .67) and cluster A (range .48 to .61). PD feature dimensions showed significant declines over time and the decline in scores was more rapid for the personality disorder group than for the non-PD group.

The LSPD (19) represents a notable incremental addition via its relatively large size, use of standardized instruments administered reliably by monitored clinicians blind to baseline findings, dimensional measures for all 11 DSM-III-R PD categories, and the critically important additions of a comparison group (i.e., non-PD) and the use of three assessment time-points. This study, however, is limited by its relatively homogeneous study group of Cornell undergraduates, its developmental time-frame of 18 to 22 year olds, and insufficient frequency of any single PD diagnosis at a categorical (threshold) level to allow comment regarding stability of any specific clinical entity. Thus, the LSPD represents a major advance to the literature that will, however—as noted by Lenzenweger (19)—require repeated measure longitudinal data from clinically-based PD samples to provide a clearer picture of the stability and course of dysfunctions of personality.

AXIS I AND II COMORBIDITIES AND CONTINUITIES

The relationships between Axis I and Axis II disorders (23-28) and between Axis II disorders (29-31) although the focus of much research, have received relatively little attention vis-a-vis the issue of PD stability. We identify here two important concepts based on our review of the DSM-III-R era PD course and stability studies—comorbidity and continuity.

Comorbidity

Most studies contained participants who met criteria for multiple Axis I and Axis II disorders. This problem of diagnostic overlap has been noted previously (30,32). The mathematical complexities inherent in sorting out meaningful patterns in such cases have long been recognized (33) and voiced as one major short-coming of “clinical samples” (19).

We note that these real-life clinical realities represent both potential confounds as well as potential opportunities to better understand personality and dysfunctions of personality. The question “what does it mean that a particular person meets criteria for several PDs”? (3) demands continued attention. What are the fundamental personality dimensions and disorders of personality (and how many are there)? How do PDs influence the onset, prognosis, and course of Axis I psychiatric disorders? How do Axis I disorders influence personality, dysfunctions of personality, and PDs over time? These important questions regarding “comorbidity” have received very little attention.

To date, most studies reporting longitudinal outcome for PD have not reported data regarding the number or categories of Axis I or other Axis II PD diagnoses. For example, Pope et al. (34) noted that 85% of their patients with DSM-III-defined borderline PD met criteria for at least one additional PD. Sixty-seven percent of these patients were characterized by stability in their borderline PD diagnosis over a 4–7 period. Does such stability characterize the borderline PD diagnosis itself or does it reflect the stability of some severe more generalized dysfunction of personality that includes several PD diagnosis?

The impact of Axis I psychiatric disorders on PD diagnoses is also uncertain. An Axis I (or another Axis II) disorder might have no effect, worsen, or perhaps even improve the course of a particular PD. The few available data paint a complex and equivocal picture. For example, some studies of borderline PD report that coexisting depression is associated with better outcome (i.e., less stability) (34) whereas coexisting substance use disorders are associated with poorer outcome (i.e., higher stability) (55). Most recently, Lenzenweger (19), in his “nonclinical” college student sample, reported that 62.8% of PD subjects and 26.4% of non-PD subjects received at least one Axis I psychiatric disorder, but that the presence of an Axis I disorder did not significantly influence changes in PD dimensions over time.

Continuity

The second point concerns “continuities” or “longitudinal comorbidities” (36), which can be thought of as one aspect of longitudinal course. One example is that the presence of conduct disorder during adolescence is a requirement for the DSM-based diagnosis

of antisocial PD in adults. Such definitional isomorphism may account for the consistently strong associations between conduct disorder and later antisocial personality disorder. This definitional isomorphism, however, is the result of longitudinal research suggesting that children and adolescents with behavior disorders were at heightened risk for antisocial behavior in adulthood (37). This highlights the need for longitudinal investigations across developmental eras. If childhood antecedents or precursors could be identified, they could—as in the case of conduct disorder for antisocial PD—become part of the diagnostic criteria. This would, in effect, create some degree of longitudinal continuity in the diagnostic system. At a more complicated level, certain disorders may be associated with one another developmentally (i.e., a PD may represent a potential vulnerability for the development of Axis I disorders).

Several DSM-III-R studies have reported data regarding longitudinal comorbidities. Johnson et al. (38) reported that PDs predict the subsequent onset of Axis I episodes, even after controlling for lifetime Axis I histories. Several studies (39–41) found that disruptive behavior disorders during adolescence predict the presence of PDs during young adulthood. One of these studies (40), however, found that some of this apparent longitudinal continuity was due to Axis I comorbidities. Myers et al. (15) reported that 61% of 137 consecutive adolescent inpatients with substance use disorders who were prospectively followed were diagnosed with DSM-III-R antisocial PD four years later. An early age (< 10 years) of onset of conduct problems and heavier drug use prior to treatment predicted onset of subsequent antisocial PD (15). A prospective longitudinal study of hyperactive children referred for treatment at a mean age of 7 revealed that 12% met criteria for antisocial PD (versus 3% in a control group) at followup assessments conducted an average of 17 years later.

One particularly impressive effort is the longitudinal study of 551 children (aged 6 to 16 at baseline) conducted by researchers at Columbia and Mount Sinai (42). Kasen and colleagues found an elevated risk for having a PD in adulthood given the presence of an adolescent PD in the same cluster. In addition to such “PD stability,” childhood disruptive disorders, anxiety disorders, and major depression significantly increased the risk of a PD diagnosis in adult independent of the presence of an adolescent PD diag-

nosis. Axis I - Axis II comorbidity significantly increased the risk of receiving a PD diagnosis in adulthood compared to the risk of having a diagnosis on only one Axis. Future research should examine such longitudinal comorbidity and continuity questions.

A related question is whether the presence of a PD negatively influences treatment outcome for Axis I disorders (43–45). Ruegg and Frances (45) concluded that the presence of a PD worsened that outcome of other psychiatric disorders in 10 of 13 studies reviewed. Our review of selected additional studies suggests this conclusion: PDs predict poorer outcome in some (46–48) but not all (49–52) studies. One study found that PD dimensions but not PD diagnoses predicted outcome of behavioral treatment for cocaine abuse (53).

The relationship between PD stability and psychosocial functioning has received little attention. It is possible, for example, that PDs represent fluctuations and are less stable over time than either personality or psychosocial functioning. Longitudinal studies with repeated assessments are needed to examine the nature of in PD symptoms/diagnoses and psychosocial functioning with a particular focus on the sequencing of patterns. Findings from a two-year followup study of adolescent inpatients (54) found concurrent validity for PD diagnoses (patients with PD were significantly more impaired than subjects without PD) but mixed predictive validity (i.e., baseline PD predicted higher drug use and greater treatment utilization but not global assessment of functioning). Unfortunately, the question of PD stability vis-a-vis psychosocial functioning remains unknown.

A major gap in our knowledge pertains to treatment seeking and utilization patterns associated with PD over time and their relations to PD stability and change. Treatment may be associated with improved outcomes or, conversely, may reflect greater dysfunction and hence appear to be associated with poorer outcome. Treatment effects on PD stability also require attention in naturalistic longitudinal studies.

Summary and Implications for Future Research

The next generation of studies that aim to examine the stability and course of PD need to rectify many of the methodologic limitations that characterize much of the existing literature and to con-

sider some of the issues noted here pertaining to comorbidities and continuities. To resolve these issues, complementary research efforts will be required with large samples of both clinical and community samples. In addition, research efforts must move on from the typical two-point (or test-retest) approach to PD stability—multiple assessments over time are required to begin to develop a better understanding of stability and course of PDs.

Studies must consider “comorbidities” on both Axis I and Axis II disorders when designing studies. Assessment protocols should attend to careful characterization of “comorbidities” at baseline and consider how best to repeatedly assess “comorbidities” over time. A more fluid approach to studying course and stability is also clearly indicated. The repeated assessments over time should aim to assessing fluctuations in symptomatology (and their timing and sequence) in addition to determining current status. Well-controlled longitudinal studies that have considered some of these issues (particularly the notions of “comorbidity,” fluctuations in symptomatology and timing/sequence of such, and associations with both treatment and broader classes of functioning) have incrementally increased our understanding of mood (i.e., NIMH Psychobiology of Depression Collaborative Study (55,56) and anxiety disorders (Harvard/Brown/Upjohn Anxiety/Panic Research Program) (57). Similar long-term longitudinal studies with well-defined subjects using multi-modal and repeated assessments are needed to address the many questions regarding the stability and course of PD over time. The ongoing investigation of Depressive Personality and its associations with mood disorders and other PD diagnoses at Stony Brook (11,13) is one such notable effort. We turn our attention to our ongoing effort—the Collaborative Longitudinal Personality Disorders Study.

COLLABORATIVE LONGITUDINAL PERSONALITY DISORDERS STUDY (CLPS)

The Collaborative Longitudinal Personality Disorders Study (CLPS) is an ongoing NIMH/NIH-funded multisite study that aims to examine whether the separation of personality disorder diagnoses to Axis II based on their putative stability, relative to the episodic unstable course of Axis I psychiatric disorders, is

valid (58). CLPS focuses on a treatment-seeking adult population with a view toward obtaining longitudinal data on four specific clinical entities (schizotypal, borderline, avoidant, and obsessive-compulsive PDs) and utilizes a comparison group of major depressive disorder without PD. An overview of the CLPS is provided to illustrate our approach to the major issues raised above.

Participants

Treatment seeking subjects aged 18 to 45 years were recruited from multiple sites at each of the four study centers (Brown, Columbia, Harvard, and Yale) and screened to determine potential eligibility. Prescreening was performed to exclude active psychosis, history of schizophrenia, schizoaffective, or schizophreniform disorders, cognitive impairments or acute substance intoxication or withdrawal that might preclude valid assessment.

The final 668 CLPS participants ranged in age from 18 to 45 ($M = 32.8$, $SD = 8.1$) years; 64% were female and 75.7% ($N = 506$) were Caucasian. The participants were generally well distributed across socioeconomic levels except for small representation in the lowest status. Roughly 43% were from outpatient clinics and 12% were from inpatient facilities. Although beyond the scope of this paper, we note here the striking paucity of data regarding PD in minority groups. To our knowledge, our sample of 162 minorities (including most notably 80 African-Americans and 62 Hispanic Americans) represents the largest available data set on PDs obtained with diagnostic interviews and followed with repeated assessments over time.

Study Group Construction: Recruitment and Measures

The overall CLPS study of 668 participants is comprised of five primary diagnostic subgroups: schizotypal ($N = 86$), borderline ($N = 175$), avoidant ($N = 157$), and obsessive-compulsive ($N = 153$), and a control group comprised of major depressive disorder without PD ($N = 97$). Although our multimethod assessments address all 10 DSM-IV-defined PD diagnoses (plus the two research category PDs), we recruited specifically for four PD diagnostic categories based on their distinctiveness (phenomenologically, empirically, and conceptually) as described thus far in the literature.

The selection of major depressive disorder (without any PD) as a comparison group was based on several factors. First, as we noted above, most of the existing PD literature lacks a "relevant" comparison group (cf.: LSPD (19) to provide a context for interpreting course and outcome. MDD is a well studied disorder found to manifest an episodic course (i.e., partial and complete remissions and relapses over time) (56).

Recruitment and screening were targeted for the four PD groups and the MDD control group. We utilized a two stage diagnostic process (self-report screen plus interview) similar to that used in the LSPD (20). Potential participants who were positive on an abbreviated version of the Personality Disorder Questionnaire (59) for one of the four PD study groups or were positive for MDD on the Inventory to Diagnose Depression (60) were administered structured diagnostic interviews to assess Axis I and Axis II disorders.

The Structured Clinical Interview for DSM-IV Disorders-Patient Version (SCID-I/P; 61) was administered to assess Axis I psychiatric disorders (current and lifetime). The Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; 62) was administered to assess the presence of PDs. The DIPD-IV stipulates that criteria must be present and pervasive for at least two years and be characteristic of the person for most of his or her adult life. The Longitudinal Interval Follow-up Evaluation (LIFE-Base) (63) was administered to complement the SCID-I assessment and to provide baseline data regarding psychiatric functioning as well as detailed data regarding psychosocial functioning and health care utilization.

All research interviewers at all sites received intensive training from the developer (Dr. Mary Zanarini) of the DIPD-IV and from the investigators who were well acquainted with the SCID-I and LIFE. A week of intensive training was followed by on-going monitoring and supervision of the interviewers by the Investigators at each study site as well as monthly conference calls held by Dr. Mary Zanarini with all project coordinators and research interviewers. Baseline interrater and one-week test-retest reliability has been assessed and detailed elsewhere (64). Interrater reliability for all PD diagnoses ranged from kappa coefficients of .58 to 1.0; for the four PD study groups, kappas were: .68 (AVPD, BPD), .71 (OCPD), and 1.0 (STPD). Test-retest reliability for the four

PD diagnostic study groups of primary focus ranged from .64 (STPD) to .74 (OCPD).

In addition to the DIPD-IV diagnostic findings, we also required an additional “confirmation” step for assigning a participant to one of the four PD study groups. Specifically, the presence of the PD diagnosis needed to be confirmed by at least one of two independently obtained methods. Either a treating clinician’s ratings on the Personality Assessment Form (PAF; 65) or a score above the relevant threshold score on the self-report Schedule for Nonadaptive and Adaptive Personality (SNAP; 66) was required to confirm the DIPD-IV diagnosis. These contrasting supplemental methods of assessment were chosen to increase our confidence in the diagnostic assignment via data from different methodologic bases.

Baseline Axis I and Axis II Characterization

In our clinical sample (i.e., in treatment or treatment-seeking), diagnostic co-occurrence between Axis I psychiatric disorders and Axis II PD as well as between the four PD study groups and other PD diagnoses was common. Patterns of co-occurrence of Axis I and II diagnoses for the five CLPS study groups have been detailed elsewhere (67,68). Briefly, the overall study group ($N = 668$) was assigned a mean of 3.4 ($SD = 1.7$; median = 3.0; range 0 to 9) lifetime Axis I diagnoses. Overall, the five study groups differed significantly in the number of assigned diagnoses. The STPD ($M = 3.8$) and BPD ($M = 4.1$) groups did not differ significantly from each other; the BPD group had significantly more lifetime Axis I diagnoses than the AVPD ($M = 3.5$), OCPD ($M = 3.0$), and MDD ($M = 2.6$) groups which did not differ significantly from each other. This careful baseline characterization of all co-occurring Axis I and Axis II diagnoses (as well as retrospective assessments of lifetime Axis I diagnoses (including age of onset) provides the context for the ongoing longitudinal assessments of Axis I and Axis II disorders.

Longitudinal (Repeated) Assessments

CLPS represents a repeated measures follow-along. An overview of the CLPS timeline and major assessment components are

shown in Table 1. Following the characterization noted above at baseline, participants are re-assessed again at 6-months, 12-months, and yearly thereafter. Currently, we have completed 24-month assessments and are beginning to examine the short-term course of the study groups. At 24-months, CLPS has successfully retained over 90% of participants. Continued yearly assessments will continue.

We will now briefly comment on the CLPS longitudinal assessment methodology. We comment selectively on those assessments that speak most directly to the issues regarding longitudinal comorbidities and continuities at the diagnostic level.

As we noted above, it is necessary to move beyond the test-retest approaches that characterize much of the existing literature. In addition to multiple assessment time-points, CLPS assessment protocols were designed to obtain a fluid and more continuous view of the four PD study groups and MDD control group (as well as co-occurring Axis I and Axis II disorders).

To follow Axis I disorders (as well as treatment utilization and psychosocial functioning), the LIFE-FA (63) is administered. This

TABLE 1
Summary and Timetable of Major Assessment

<i>Instrument</i>	<i>Screening</i>	<i>Follow-up Intervals</i>					
		<i>BL</i>	<i>6 Mo.</i>	<i>1 Year</i>	<i>2 Year</i>	<i>3 Year</i>	<i>4 Year</i>
PSQ	X						
DSQ	X						
SCID-I		X					
DIPD-IV		X			X		X
DIPD-FA			X	X	X	X	X
LIFE		X	X	X	X	X	X
SNAP		X		X	X		X

Personality Screening Questionnaire (PSQ) (59)

Depression Screening Questionnaire (DSQ) (60)

Structured Clinical Interview for DSM-IV (SCID-I) (61)

Diagnostic Interview for Personality Disorders-IV (DIPD-IV) (62)

Longitudinal Interval Follow-up Evaluation (LIFE-Base and LIFE-FA) (63)

Schedule for Normal and Abnormal Personality (SNAP) (64)

Personality Assessment Form (PAF) (65)

Diagnostic Interview for Personality Disorders-Follow Along (DIPD-FA) (68)

methodology follows directly from that used in the mood and anxiety disorders fields to produce an impressive profile of the course, treatment, and outcome of those disorders. The LIFE-FA (63) provides a thorough assessment methodology to allow characterization (including the timing and sequencing) of Axis I disorders in terms of individual episodes, partial and full remissions, length of recovery periods, and time to subsequent relapses), including weekly intervals for symptomatology. Detailed data for weekly and monthly time intervals for both treatment utilization and psychosocial functioning (including a Global Assessment Functioning Scale) are also obtained.

To follow the four PD study groups, a follow-up version of the DIPD-IV was developed by Dr. Mary Zanarini—the DIPD-FA (69). The DIPD-FA was designed to complement the data obtained from the DIPD-IV which is administered by raters blinded to previous assessments at two-year intervals (i.e., baseline, 24-months, 48-months, etc). The DIPD-FA allows (similar to the LIFE-FA) a detailed and more fluid assessment of the course of the four specific PD groups during each assessment interval. The DIPD-FA provides data regarding the monthly stability of the PDs and their criteria as well as specifics regarding any changes and their specific timing. The DIPD-FA is administered by the same rater within each two-year interval. Ongoing reliability studies are planned to prevent drift and to provide a context for our findings. The DIPD-FA and LIFE-FA will provide the necessary data to examine the various issues raised here regarding comorbidities and continuities and their sequencing.

CONCLUSION

This paper briefly reviewed findings and resolved issues pertaining to the stability and course of personality disorders. Available data suggest that PD diagnoses demonstrate only moderate stability. However, numerous methodologic limitations characterize much of the literature and the strength of this conclusion. This paper focused on two important concepts—comorbidity and continuity—that the next generation of studies of PD must consider. We briefly described the Collaborative Longitudinal Personality Disorder Study in relation to these issues.

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